LATCH (LATCHING) TYPE HEAT-DRIVEN MICRORELAY DEVICE (09-161640
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JAPIO

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Heat drive type micro relay element - has liquid metal provided at inside of channel and establishes contact between first/second signal electrode pairs

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Patent Family

Patent Number	Kind	Date	Application Number	Kind	Date	Week	Type
JP 9161640	A	19970620	JP 96163401	A	19960624	199735	B
KR 97054597	A	19970731	KR 9549249	A	19951213	199911	
JP 3050526	B2	20000612	JP 96163401	A	19960624	200032	
KR 174871	B1	19990201	KR 9549249	A	19951213	200039	

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Patent Details

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JP 9161640	A		10	H01H-061/00	
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Abstract:

JP 9161640 A

The relay element has an active storage unit (10) and a passive storage unit (40) having same volume and which are arranged at predetermined intervals on a semiconductor substrate (100). A first heater (12) which heats the internal air and a second heater (42) are provided in the active and passive storage units respectively. A channel (20) which extends in the space between the active and passive storage units, serves as liquid metal shifting path. A pair of first signal electrodes (31,32) are mutually isolated.

One end of the first signal electrodes are inserted inside the predetermined area of the channel and other end extends outside. A pair of second signal electrodes (34,35) which are isolated are arranged similar to shaft of the first electrode pair. Liquid metal (50) provided at inside of the channel establishes contact between the first and the second electrode pair. A pair of glass substrates (120,130) are attached to the top and bottom side faces of the semiconductor substrate.

ADVANTAGE - Enables size reduction.

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